

Claims

- [c1] 1. A bicycle power supply comprising:
a first storage element structured to receive power arising from an AC power supply for supplying power to a first electrical component; and
a second storage element structured to receive power from the AC power supply for supplying power to a second electrical component.
- [c2] 2. The power supply according to claim 1 further comprising a power inhibiting unit structured to prevent power from being communicated from the first storage element to the second electrical component.
- [c3] 3. The power supply according to claim 2 wherein the power inhibiting unit is structured to prevent power from being communicated from the second storage element to the first electrical component.
- [c4] 4. The power supply according to claim 1 further comprising a rectifier circuit that converts AC current received from the AC power supply into DC current, wherein the rectifier circuit is operatively coupled to supply power to the first storage element and to the sec-

ond storage element.

- [c5] 5. The power supply according to claim 4 further comprising a reverse current inhibiting unit operatively coupled between the first storage element and the second storage element to inhibit current from flowing from one of the first storage element and the second storage element to the other one of the first storage element and the second storage element.
- [c6] 6. The power supply according to claim 5 wherein current flows from the first storage element to the second storage element.
- [c7] 7. The power supply according to claim 6 wherein current flows from the first storage element to the second storage element through the reverse current inhibiting unit.
- [c8] 8. The power supply according to claim 7 further comprising a power switch unit that selectively switches current from the rectifier circuit to the first storage element in response to a voltage of the first storage element.
- [c9] 9. The power supply according to claim 7 wherein the reverse current inhibiting unit comprises a diode.
- [c10] 10. The power supply according to claim 7 wherein the

first and second storage elements are structured to provide power to the first and second electrical components such that the first electrical component has a higher capacitance than the second electrical component.

[c11] 11. The power supply according to claim 10 wherein the first storage element is structured to provide power to a mechanical adjusting mechanism.

[c12] 12. The power supply according to claim 10 wherein the second storage element is structured to provide power to a microprocessor.

[c13] 13. The power supply according to claim 5 wherein the first and second storage elements receive current from the rectifier circuit in parallel.

[c14] 14. The power supply according to claim 13 wherein the reverse current inhibiting unit comprises:
a first reverse current inhibiting circuit operatively coupled between the rectifier circuit and the first storage element; and
a second reverse current inhibiting circuit operatively coupled between the rectifier circuit and the second storage element.

[c15] 15. The power supply according to claim 14 wherein the first reverse current inhibiting circuit comprises a first

diode, and wherein the second reverse current inhibiting circuit comprises a second diode.

- [c16] 16. The power supply according to claim 13 further comprising a power switch unit that selectively switches current from the rectifier circuit to at least one of the first storage element and the second storage element.
- [c17] 17. The power supply according to claim 16 wherein the reverse current inhibiting unit comprises the power switch unit.
- [c18] 18. The power supply according to claim 16 further comprising a voltage stabilizing circuit coupled to at least one of the first storage element and the second storage element.
- [c19] 19. The power supply according to claim 16 wherein the power switch unit comprises:
 - a first power switch circuit that selectively switches current from the rectifier circuit to the first storage element;
 - and
 - a second power switch circuit that selectively switches current from the rectifier circuit to the second storage element.
- [c20] 20. The power supply according to claim 19 wherein the reverse current inhibiting unit comprises a diode coupled

between the power switch unit and at least one of the first storage element and the second storage element.

[c21] 21. The power supply according to claim 19 wherein the reverse current inhibiting unit comprises:
a first diode coupled between the first power switch circuit and the first storage element; and
a second diode coupled between the second power switch circuit and the second storage element.

[c22] 22. The power supply according to claim 19 wherein the first power switch circuit selectively switches current from the rectifier circuit to the first storage element in response to a voltage at the first storage element, and wherein the second power switch circuit selectively switches current from the rectifier circuit to the second storage element in response to a voltage at the second storage element.

[c23] 23. The power supply according to claim 16 wherein the first and second storage elements are structured to provide power to the first and second electrical components such that the first electrical component has a higher capacitance than the second electrical component.

[c24] 24. The power supply according to claim 23 wherein the first storage element comprises:

a first split first storage element; and
a second split first storage element.

[c25] 25. The power supply according to claim 24 wherein the power switch unit comprises:

a first power switch circuit that selectively switches current from the rectifier circuit to the first split first storage element; and

a second power switch circuit that selectively switches current from the rectifier circuit to the second split first storage element.

[c26] 26. The power supply according to claim 25 wherein the reverse current inhibiting unit comprises:

a first diode coupled between the first power switch circuit and the first split first storage element; and

a second diode coupled between the second power switch circuit and the second split first storage element.

[c27] 27. The power supply according to claim 25 wherein the first power switch circuit selectively switches current from the rectifier circuit to the first split first storage element in response to a voltage at the first split first storage element, and wherein the second power switch circuit selectively switches current from the rectifier circuit to the second split first storage element in response to a voltage at the second split first storage element.

- [c28] 28. The power supply according to claim 25 wherein the first split first storage element and the second split first storage element are structured to provide power to at least one mechanical adjusting mechanism.
- [c29] 29. The power supply according to claim 28 wherein the first split first storage element is structured to supply power to a transmission adjusting mechanism, and wherein the second split first storage element is structured to supply power to a suspension adjusting mechanism.
- [c30] 30. The power supply according to claim 29 wherein the second storage element is structured to provide power to a microprocessor.
- [c31] 31. The power supply according to claim 23 wherein the second storage element comprises:
a first split second storage element; and
a second split second storage element.
- [c32] 32. The power supply according to claim 24 wherein the power switch unit comprises:
a first power switch circuit that selectively switches current from the rectifier circuit to the first split second storage element; and
a second power switch circuit that selectively switches

current from the rectifier circuit to the second split second storage element.

[c33] 33. The power supply according to claim 32 wherein the reverse current inhibiting unit comprises:
a first diode coupled between the first power switch circuit and the first split second storage element; and
a second diode coupled between the second power switch circuit and the second split second storage element.

[c34] 34. The power supply according to claim 32 wherein the first power switch circuit selectively switches current from the rectifier circuit to the first split second storage element in response to a voltage at the first split second storage element, and wherein the second power switch circuit selectively switches current from the rectifier circuit to the second split second storage element in response to a voltage at the second split second storage element.

[c35] 35. The power supply according to claim 25 wherein the first split second storage element is structured to provide power to a microprocessor.

[c36] 36. The power supply according to claim 35 wherein the second split second storage element is structured to

provide power to a sensor element.

- [c37] 37. The power supply according to claim 36 wherein the first storage element is structured to provide power to a mechanical adjusting mechanism.